

Work Order ID 136200

Friday, August 28, 2015 2:26:32 PM

649.5301
B136200
REV. C1

136200

Page 1

Item ID: 649.5301

Revision ID:

Item Name: Lower Deflector Assembly

Start Date: 8/28/2015 Start Qty: 1.00

Required Date: 8/28/2015 Req'd Qty: 1.00

Reference:

Accept

N19000040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Customer:

Approvals:

Process Plan: SH/LL

Date: 20150901
Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
649.5300	C1

110 Pick Kit 0.00

110

Packaging

Memo

0.00

Packaging

120

120

Small Fab

Small Fab

Memo

Assemble as per dwg and apply loctite 598 on all faying surfaces per note.

A/R RTV LOCTITE 598: 4131311
exp. date: 11/16

0.00

0.00

130

130

QC

Quality Control

QC5- Inspect part completeness to step on W/O 0.00

Memo

0.00

DAS
36
9-89

DAS
36
9-89

DAS
38
9-89

SEP 21 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐				

Work Order ID 136200***136200***

Page 2

Friday, August 28, 2015 2:26:32 PM

Item ID: 649.5301

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Lower Deflector Assembly

Start Date: 8/28/2015 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 8/28/2015 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

140 Identify as per dwg & Stock Location: ackosi 0.00***140***

Packaging Memo 0.00

Packaging ***IDENTIFY AS PER IAW MPP-120***

1
BAS
27
9-89

SEP 24 2015

150 QC21- Final Inspection - Work Order Release 0.00

150

QC Memo 0.00

Quality Control

MS SEP 25 2015

SU 20150925

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Friday, August 28, 2015 1:57:09 PM

Page 1

Work Order ID: 136200

136200

Parent Item: 649.5301

649 5301

Parent Item Name: Lower Deflector Assembly

Start Date: 8/28/2015

Required Date: 8/28/2015

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 13.09.03 NEW ISSUE DD VERF:JLM IPP
REV:B 14.12.02 AS PER DWG REV C1 DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
649.5310 *649 5310* Lower Deflector		Manufactured	No				Each	6.0000		1 DAS 30 9-89			SEP 17 2015
				<u>Location</u>				<u>Loc Qty</u>					
				MF				6					
					127876			6					
649.5312 *649 5312* Breakaway Tip		Manufactured	No				Each	4.0000		1 DAS 30 9-89			SEP 17 2015
				<u>Location</u>				<u>Loc Qty</u>					
				MF				4					
					127370			4					
MS20470AD6-14 *MS20470AD6-14* Rivet		Purchased	No				Each	6.0000		2 DAS 30 9-89			SEP 17 2015
				<u>Location</u>				<u>Loc Qty</u>					
				ST309				6					
					m130741			6					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

APICAL
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO. 04744

SHEET 1 OF 1

DWG NO. 649.5300

REV: C

PREPARED
BY T. CROSS

DATE: 11-18-14

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: DEFLECTORS

APPROVED BY:

ENGR

MFG

QC

EFF:

NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: REVISED BOM

ECR:

D-14-08

ACTION LIST:
1. NONE

20150901

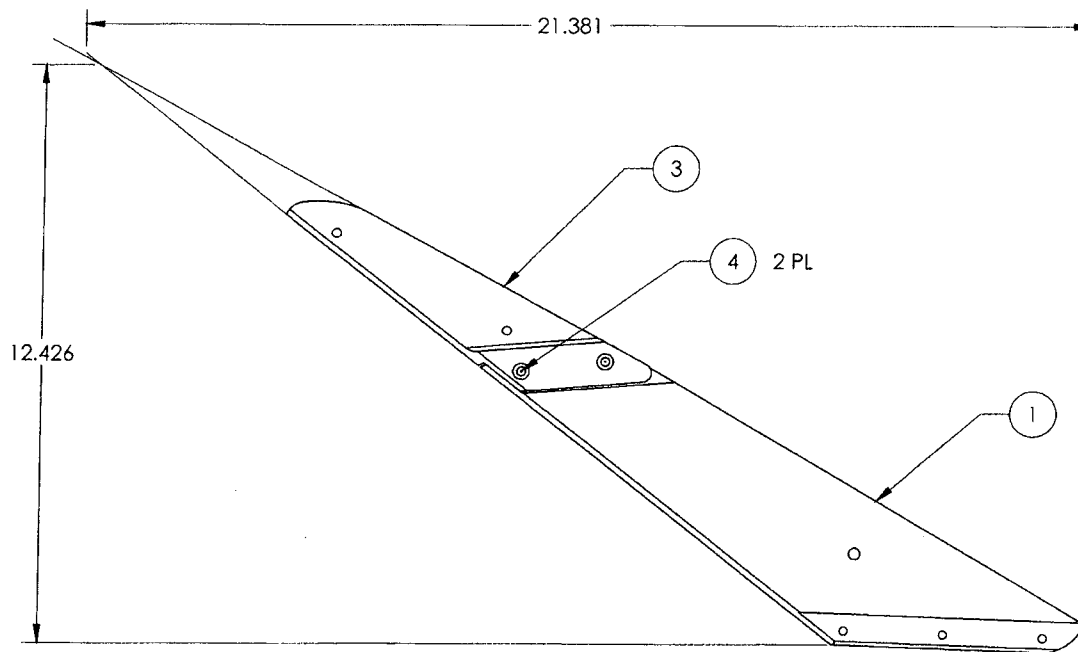
SH

136200

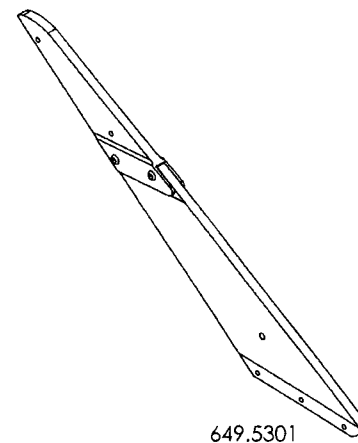
4	R	601.3122	2	RIVET	MS20470AD6-14	
F/N	TC	PART NUMBER	5301 QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				CHANGE CATEGORY		DER REVIEW REQUIRED
☐ MDL ☐ INSTALL INSTRUC ☐ ICA ☒ BOM				☐ MAJOR ☒ MINOR		☐ YES ☒ NO

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- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH: HARD ANODIZE IAQ MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
PRE TREAT PRC-DESOTO PR-148 ADHESION PROMOTER;
PRIMER IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX
3. DEBURR AND BREAK ALL SHARP EDGES
4. IDENTIFY IAW MPP-120
- 5 APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2 & 3 UPON ASSY



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE REVISION: PR1		N/A
N/C	INITIAL RELEASE	12/06/11	P. BRAVO
A	INCORPORATED ECN'S 03413, 03421 AND 03486	04/16/12	P. BRAVO
B	INCORPORATED ECN 03503	05/23/12	P. BRAVO
C	INCORPORATED ECN 04057	06/13/13	P. BRAVO

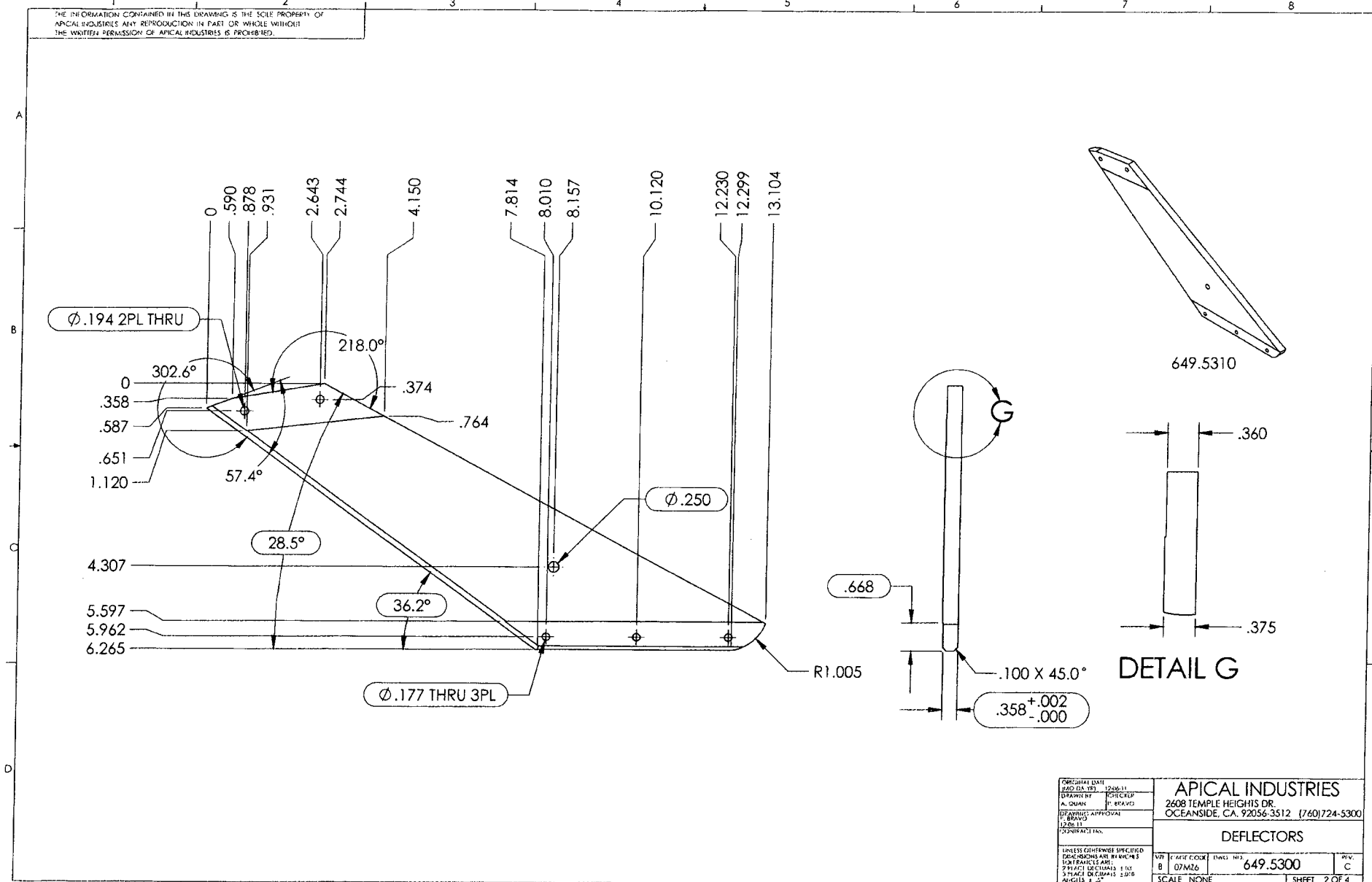


UNINCORPORATED ECN(s)

04744

A/R	5	601.2045	RTV, LOCTITE 598		△
2	4	601.3074	RIVET	MS20470AD6-12	
1	3	649.5312	BREAKAWAY TIP		△ △
	2	649.5311	UPPER DEFLECTOR		△ △
1	1	649.5310	LOWER DEFLECTOR		△ △
△		649.5301	DEFLECTOR ASSY		
	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
	QTY	PARTS LIST			
	NEXT ASSY (S)	ORIGINAL DATE 12/06/11			
	649.4900	DRAWN BY: A. QUAN, CHECKED BY: P. BRAVO			
		DRAWING APPROVAL: P. BRAVO			
		EFFECTIVE DATE: 12/06/11			
		APICAL INDUSTRIES			
		2008 TEMPLE HEIGHTS DR.			
		OCEANSIDE, CA. 92056-3512 (760)724-5300			
		DEFLECTORS			
		NOTES ON THIS DRAWING: 1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED. 2. TOLERANCES ARE: 3. HOLE LOC (MAX) 2.00 ANGLES 1:1			
		SHEET NO. 071226	FORM NO. 649.5300	REV. C	
		SCALE: NONE	SHEET 1 OF 4		

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ORIGINAL DATE 240 DA 101 12/08/11		APICAL INDUSTRIES	
DRAWN BY A. QUAN		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED BY J. BRAY		DEFLECTORS	
APPROVED BY J. BRAY		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS ARE: 2 PLACES DECIMALS 1/16 3 PLACES DECIMALS 1/32 ANGLES 1/2°	
CONTRACT NO.		REV. C	649.5300
SCALE NONE		SHEET 2 OF 4	

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.13 X 45° 2PL

SECTION C-C

Ø .177 THRU 3 PL

.30 X 23.0°

R1.100

2.109±.002

4.219±.002

DETAIL A

.375

17.93

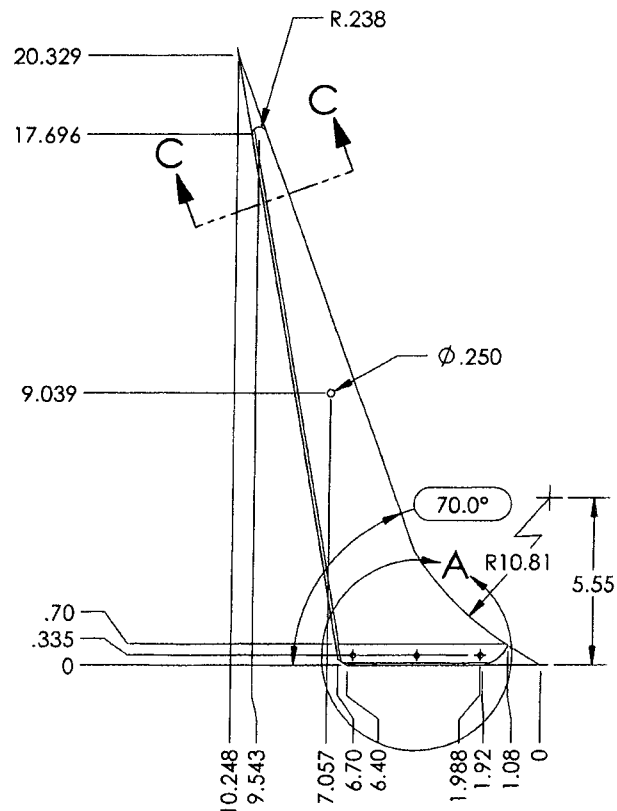
.701

.04 X 45.0° 2PL

.358^{+.000}_{-.002}

DETAIL B

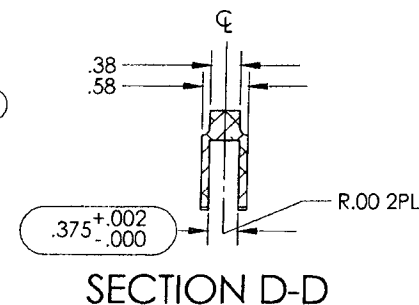
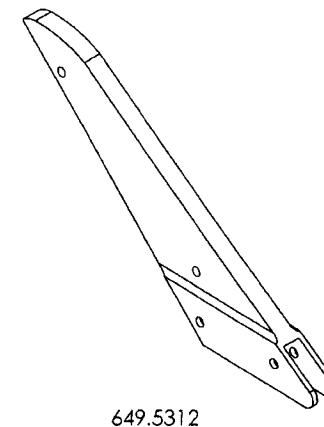
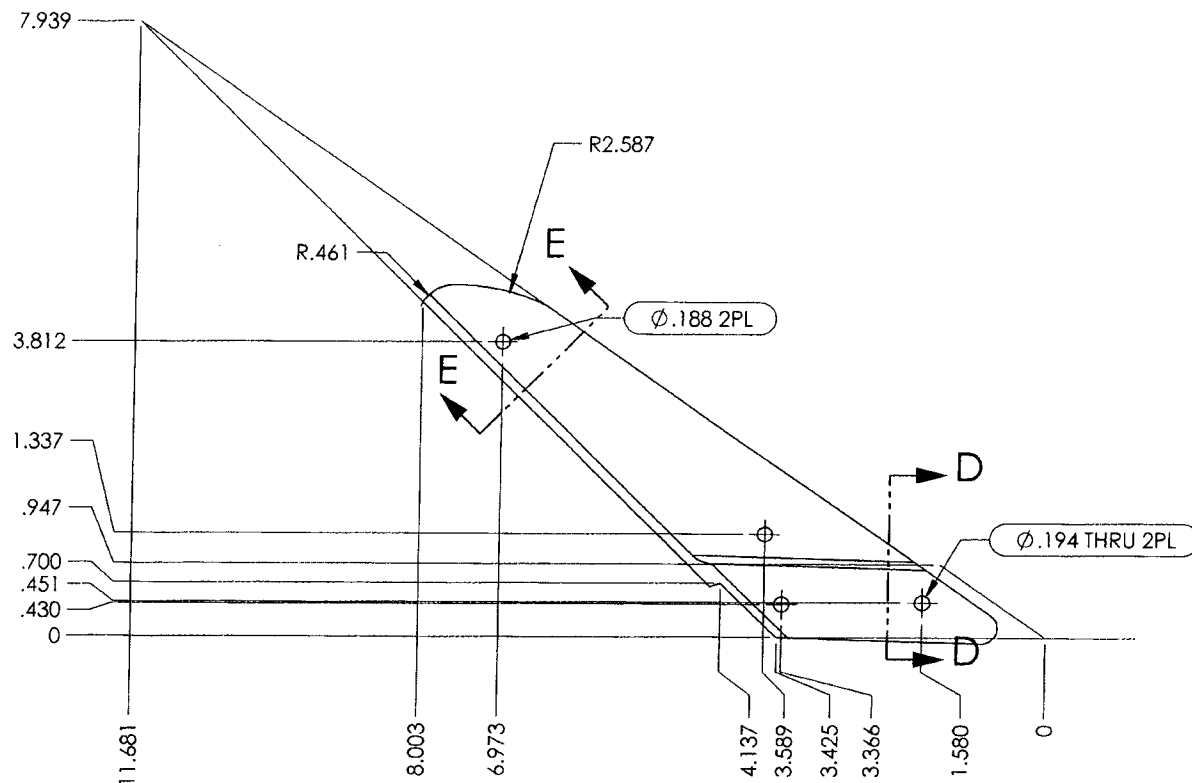
649.5311



ORIGINAL DATE 11/05/04-11		2/08-11	
DRAWN BY A. GLIAN		CHECKED P. BRAVO	
DRAWING APPROVAL P. BRAVO		12/06/11	
CONTRACT No.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.03 3 PLACE DECIMALS ±.010 ANGLES ±.5°			
APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300		DEFLECTORS	
SHEET B	CAGE CODE 07M26	DWG. NO. 649.5300	REV C
SCALE NONE		SHEET 3 OF 4	

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.13 X 45.0° 2PL
SECTION E-E



ORIGINAL DATE 10/20/10 12:00:11 DRAWN BY A. CHAI CHECKED BY P. BRAY DRAWING APPROVAL P. BRAY 11/20/11 C/MINACT/TH		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.010 3 PLACE DECIMALS ±.005 ANGLES ±.5°		NET CASH CODE 8 07M26	DOWNGRADING 649.5300
SCALE NONE		REV C	SHEET 4 OF 4